

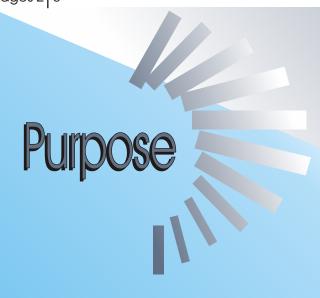
Unintentional Injury in San Diego County

An Executive Summary

July 1, 1999 through June 30, 2000

December 2002





The purpose of this publication is to provide a summary of the unintentional injury data contained in Unintentional Injury in San Diego County 1999/2000. The full report provides detailed community level information on who, where, and why patients access emergency medical services in San Diego County in order to help health professionals identify patterns within their communities. The full report may be obtained from Leslie Upledger Ray at the Division of Emergency Medical Services by calling (619) 285-6429.



Acknowledgments

We acknowledge the contributions of the following individuals for their work in the preparation of this report:

Nancy L. Bowen, MD, MPH, Public Health Officer

Emergency Medical Services (EMS) staff: Gwen S. Jones, Chief Patricia A. Murrin, RN, MPH, EMS Coordinator Leslie Upledger Ray, MA, MPPA, Senior Epidemiologist Edward M. Castillo, MPH, Biostatistician Barbara M. Stepanski, MPH, Biostatistician Alan M. Smith, MPH, Epidemiologist

Chronic Disease & Injury Prevention and Health Promotion Adrienne Collins Yancey, Acting Chief Bruce Even, Health Information Specialist II

County of San Diego Board of Supervisors

Greg Cox, District 1 Dianne Jacob, District 2 Pam Slater, District 3 Ron Roberts, District 4 Bill Horn, District 5

Walter F. Ekard, Chief Administrative Officer

Rodger G. Lum, Ph.D., Director, Health and Human Services Agency

Data Sources

The Divisions of Chronic Disease & Injury Prevention and Health Promotion and Emergency Medical Services used three population-based data sources for the preparation of the Unintentional Injury in San Diego County 1999/2000 Report.

Prehospital Database:

EMS receives a prehospital patient record (PPR) for every patient seen by a paramedic or emergency medical technician. The PPR contains information including demographics, incident zip code location, chief complaint, patient status, injury event information, restraint use, contributing factors, times and outcomes.

Trauma Registry:

EMS receives an abbreviated Trauma Registry for every trauma patient admitted to any designated trauma center hospital trauma service. A detailed Trauma Registry is received for every trauma patient who meets one or more of the following criteria: length of hospitalization of at least 24 hours, admission to intensive or intermediate care unit, death due to traumatic injuries, and/or transfer to or from another acute care hospital.

Medical Examiner's Data:

EMS receives an Investigative Summary and Autopsy for every individual who dies in San Diego County from a traumatic injury. Medical Examiner's records contain injury-related information including date and time of injury, incident location, patient home zip code, external cause of injury (ICD9 CM E-code), age, sex, race/ethnicity, vehicle make and type, law enforcement agency and report number, mechanism of injury and detailed narrative of injuries sustained.





Data Statistics

This publication contains two types of statistics: incident and rate. An incident answers the "how many" question while a rate is used to compare risk between groups.

Incident:

The incident is the number of occurrences for the specific injury type. Incidents should not be used to compare different racial/ethnic groups, age groups or geographic areas. For these comparisons, use rates, which take into account differences in population sizes.

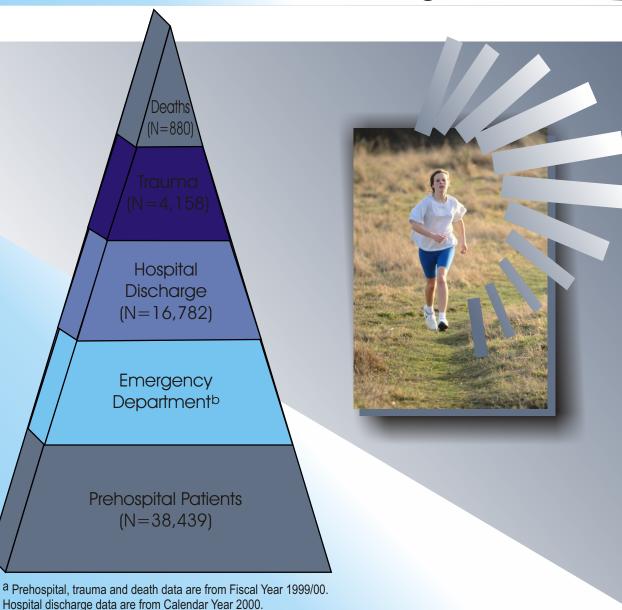
Rate:

The rate is calculated as incidents per 100,000 population. Rates were calculated using January 1999 population estimates provided by the San Diego Association of Governments (SANDAG). Rates were not calculated for categories with less than five occurrences due to instability.

Unintentional Injury Pyramid for San Diego County^Q

b Data not available.

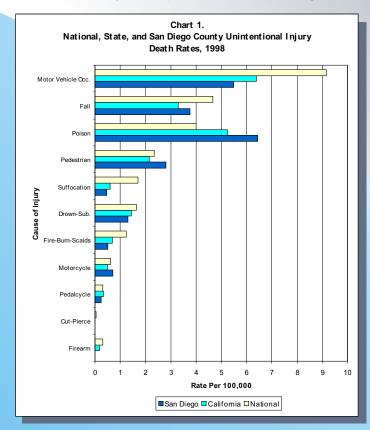
Diego County are injured seriously enough to require emergency medical attention by paramedics or emergency medical technicians (EMTs). Half of these will be hospitalized as a result of their injuries. Of those hospitalized, one fourth will require specialized trauma care. Every week, 17 people in San Diego County die as a result of injury.



National, State and San Diego County Rates of Unintentional Injury (1998)

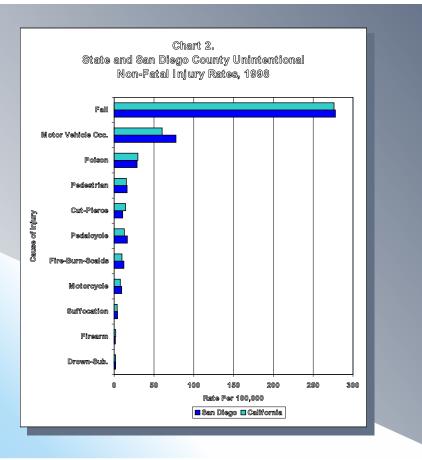
Rates of unintentional fatal injuries in San Diego County were generally lower than those of the United States and generally similar or lower than the rates of California. However, non-fatal rates in San Diego County were higher than those of California for motor vehicle occupant (MVO) crashes, motorcycle, pedalcycle, pedestrian, falls, suffocation and drown-submersion (United States data for non-fatal injuries were not comparable due to differences in data sources). Many of these differences can be explained by the temperate climate of San Diego that allows for the

many recreational activities available to residents and visitors alike. Of these, the rate of falls was the highest of non-fatal injury at 281.89 per 100,000 population (281.89/100,000) followed by Motor Vehicle Occupant crashes (78.69/100,000) in San Diego County.



Source: California Department of Health Services.

Note: National
non-fatal data are
estimated from
emergency
department
surveys and
therefore not
comparable to
State and San
Diego hospital
discharge data.



To ensure comparable rates from injury categories, 1998 data were used for Chart 1 and 2 because they were the most recent data available using the ICD9 E-Code coding system. Presently, non-fatal data is still coded using the ICD9 coding system. As of 1999, all nationally reported death data utilize the ICD10 coding system. However, injury grouping for the ICD10 is substantially different. The fatal injury rates for San Diego listed in Chart 1 and Chart 3 (see Page 6) vary slightly because of this difference in reported years.

San Diego County Incidents and Rates of Unintentional Injury (FY 1999/00)

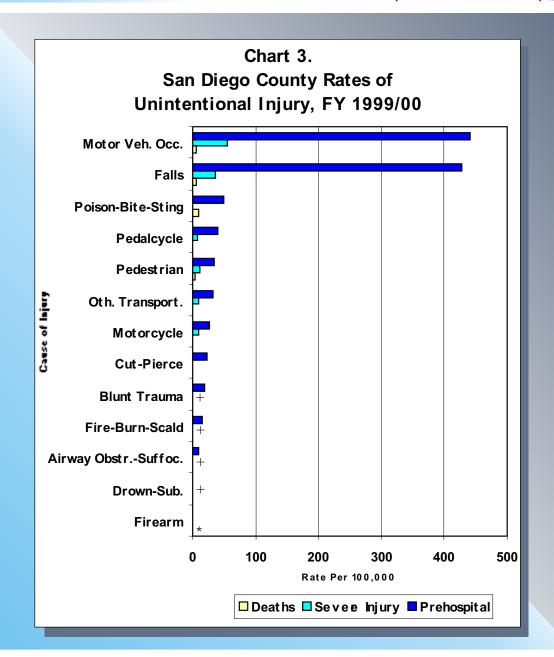
Prehospital, trauma, and medical examiner patients predominantly suffered MVO crashes and fall injuries. The rates of prehospital pedalcycle and cut/pierce injuries were relatively high, however the rates for trauma and medical examiner data for these injuries were not as severe as many other unintentional injuries.

It is reasonable to suggest, based on the mechanism and sites of injuries sustained by pedalcyclists, that the most severe of these injuries were to the head and were in patients not wearing appropriate protective equipment such as helmets.

The majority of cut/pierce injuries were to extremities, and although these injuries may require medical attention, they are less often life threatening.

Motor vehicle crashes and falls resulted in significantly more deaths and injuries than other unintentional causes.

While the death rate was significantly higher for poison/bite/sting injuries, this category included all drug overdose deaths that are not specifically identified as suicides. Drug-related overdose deaths are not typically considered unintentional injuries. However, bites, stings, and poisonings from toxic substances such as household chemicals are considered unintentional injuries.



Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Prehospital Database, Trauma Registry, Medical Examiner's Data, FY 1999/00

^{*}Rates not calculated for less than 5 incidents

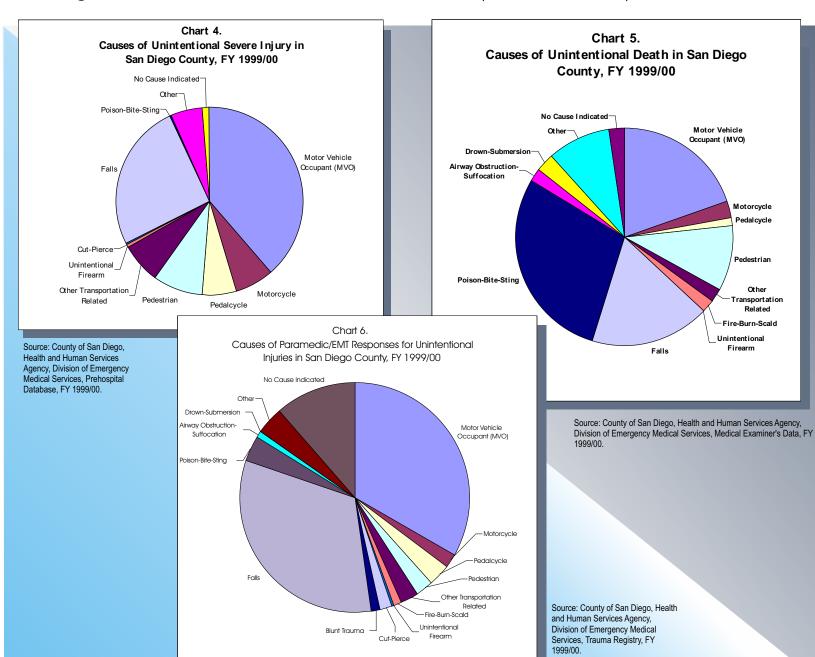
⁺Not collected in Trauma Registry or Medical Examiner's Database

Leading Causes of Unintentional Injury (FY 1999/00)

The leading causes of unintentional injury in San Diego were predominantly fallsl and Motor Vehicle Occupant (MVO) crashes. Falls were more prevalent among young children and older individuals. MVO crashes occurred most often among young adult and middleaged injury patients.

Overall, MVO crashes were the most common type of injury among all races. However, falls were more common among white prehospital patients and patients who died, which was primarily due to a higher proportion of older individuals in this category. Trauma patients were predominantly injured in MVO crashes.

There were differences between the rates of MVO crashes and falls between Major Statistical Areas (MSA's), but these differences were small. A map of MSA's is on Page 8.



San Diego County—Major Statistical Areas and Subregional Areas



Leading Causes of Unintentional Injury by Age Group: Paramedic/EMT Responses

	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Overall
1	Fall 669 (285.22)	MVO 409 (183.04)	MVO 428 (209.22)	MVO 1902 (985.21)	MVO 1929 (862.16)	MVO 2451 (555.44)	MVO 2012 (426.37)	MVO 1453 (404.97)	Fall 917 (407.28)	Fall 1399 (797.72)	Fall 2813 (2442.86)	Fall 2322 (5223.38)	MVO 12829 (440.64)
2	MVO 342 (145.81)	Fall 392 (175.43)	Fall 405 (197.98)	Fall 344 (178.19)	Fall 362 (161.79)	Fall 709 (160.67)	Fall 991 (210.00)	Fall 1069 (297.95)	MVO 751 (333.55)	MVO 536 (305.63)	MVO 423 (367.34)	MVO 114 (256.44)	Fall 12440 (427.28)
3	Poison- Bite-Sting 84 (35.81)	Pedal cycle 145 (64.89)	Pedalcycle 252 (123.19)	Poison- Bite-Sting 167 (85.50)	Motorcycle 139 (62.13)	Poison- Bite-Sting 270 (61.19)	Poison- Bite-Sting 360 (78.20)	Poison- Bite-Sting 223 (62.15)	Poison- Bite-Sting 62 (27.54)	Pedestrian 56 (31.93)	Pedestrian 33 (28.66)	Poison- Bite-Sting 17 (38.24)	Poison- Bite-Sting 1447 (49.70)
4	Fire-Burn- Scald 71 (30.27)	Pedestrian 119 (53.26)	Other Trans* 158 (77.24)	Other Trans* 139 (72.00)	Poison- Bite-Sting 138 (61.68)	Motorcycle 198 (44.87)	Pedal cycle 169 (35.81)	Pedal cycle 136 (37.91)	Pedestrian 58 (25.76)	Other Trans* 36 (20.53)	Poison- Bite-Sting 24 (20.84)	Pedestrian 12 (26.99)	Pedalcycle 1178 (40.46)
5	Pedestrian 63 (26.86)	Other Trans* 55 (24.61)	Pedestrian 112 (54.75)	Pedal cycle 133 (68.89)	Other Trans* 114 (50.95)	Pedal cycle 156 (35.35)	Motorcycle 144 (30.52)	Motorcycle 109 (30.38)	Pedal cycle 40 (17.77)	Poison- Bite-Sting 32 (18.25)	Cut-Pierce 23 (19.97)	Ot her Trans* 12 (26.99)	Pedestrian 977 (33.56)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Prehospital Database, FY 1999/00. Number and rate per 100,000.

Table 3a in the Unintentional Injury in San Diego Report 1999/2000.

^{*} Other Transporation.

Leading Causes of Unintentional Injury by Race/Ethnicity: Paramedic/EMT Responses

	White	Black	Hispanic	Asian/Other	Total
1	Fall 8540 (491.24)	MVO 956 (550.85)	MVO 2791 (386.36)	MVO 1517 (547.90)	MVO 12829 (440.64)
2	MVO 5791 (333.07)	Fall 517 (297.90)	Fall 1406 (194.64)	Fall 500 (180.59)	Fall 12440 (427.28)
3	Poison-Bite- Sting 745 (42.85)	Pedestrian 112 (64.53)	Pedestrian 284 (39.31)	Pedestrian 71 (25.64)	Poison-Bite- Sting 1447 (49.70)
4	Pedalcycle 648 (37.27)	Poison-Bite- Sting 101 (58.20)	Pedalcycle 221 (30.59)	Poison-Bite- Sting 59 (21.31)	Pedalcycle 1178 (40.46)
5	Other Trans* 518 (29.79)	Pedalcycle 84 (48.40)	Poison-Bite- Sting 210 (29.07)	Pedalcycle 56 (20.23)	Pedestrian 977 (33.56)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Prehospital Database, FY 1999/00. Number and rate per 100,000.

Table 3b in the Unintentional Injury in San Diego Report 1999/2000.

^{*} Other Transportation.

Leading Causes of Unintentional Injury by Major Statistical Area: Paramedic/EMT Responses

	Central	North City	South Suburban	East Suburban	North County West	North County East	East County	Total
1	Fall	MVO	MVO	Fall	Fall	Fall	Fall	MVO
	2630	3104	1020	2429	1477	2075	182	12829
	(417.86)	(441.07)	(325.63)	(495.46)	(392.16)	(552.03)	(815.49)	(440.64)
2	MVO	Fall	Fall	MVO	MVO	MVO	MVO	Fall
	2613	2504	904	2091	1345	2073	179	12440
	(415.16)	(355.81)	(288.60)	(426.51)	(357.11)	(551.50)	(802.04)	(427.28)
3	Pedestrian 284 (45.12)	Pedalcycle 283 (40.21)	Poison-Bite- Sting 191 (60.98)	Poison-Bite- Sting 510 (104.03)	Poison-Bite- Sting 240 (63.72)	Poison-Bite- Sting 178 (47.35)	Motorcycle 86 (385.34)	Poison-Bite- Sting 1447 (49.70)
4	Pedalcycle 260 (41.31)	Pedestrian 197 (27.99)	Pedestrian 118 (37.67)	Pedalcycle 200 (40.80)	Other Trans* 190 (50.45)	Pedalcycle 155 (41.24)	Poison-Bite- Sting 29 (129.94)	Pedalcycle 1178 (40.46)
5	Cut-Pierce	Blunt Trauma	Pedalcycle	Other Trans*	Pedalcycle	Pedestrian	Other Trans*	Pedestrian
	199	181	88	183	136	109	26	977
	(31.62)	(25.72)	(28.09)	(37.33)	(36.11)	(29.00)	(116.50)	(33.56)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Prehospital Database, FY 1999/00. Number and rate per 100,000.

^{*} Other transportation.

Table 3c in the Unintentional Injury in San Diego Report 1999/2000.

Leading Causes of Unintentional Injury by Age Group: Severe Injury

	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Overall
1	Fall 130 (55.42)	Fall 63 (28.19)	Other Trans 51 (24.93)	MVO 198 (102.56)	MVO 254 (113.52)	MVO 305 (69.12)	MVO 229 (48.53)	MVO 178 (49.61)	MVO 102 (45.30)	MVO 94 (53.60)	Fall 133 (115.50)	Fall 77 (173.21)	MVO 1598 (54.89)
2	Pedestrian 41 (17.48)	MVO 52 (23.27)	Fall 49 (23.95)	Fall 33 (17.09)	Fall 43 (19.22)	Fall 104 (23.57)	Fall 141 (29.88)	Fall 118 (32.89)	Fall 79 (35.09)	Fall 94 (53.60)	MVO 76 (66.00)	MVO 29 (65.24)	Fall 1064 (36.55)
3	MVO 39 (16.63)	Pedal cycle 46 (20.59)	Pedal cycle 44 (21.51)	Motorcycle 31 (16.06)	Motorcycle 41 (18.32)	Motorcycle 75 (17.00)	Motorcycle 53 (11.23)	Pedestrian 45 (12.54)	Pedestrian 25 (11.10)	Pedestrian 20 (11.40)	Pedestrian 15 (13.03)	Pedestrian 6 (13.50)	Pedestrian 356 (12.23)
4	Pedal cycle 9 (3.84)	Pedestrian 41 (18.35)	MVO 40 (19.55)	Other Trans** 27 (13.99)	Pedestrian 30 (13.41)	Ot her Trans* * 62 (14.05)	Pedestrian 52 (11.02)	Motorcycle 36 (10.03)	Motorcycle 21 (9.33)	Other Trans** 8 (4.56)	Pedalcycle 4 (*)	Other Trans** 1 (*)	Motorcycle 281 (9.65)
5	Other Trans** 4 (*)	Other Trans* * 15 (6.71)	Pedestrian 22 (10.75)	Pedalcycle 23 (11.91)	Other Trans** 30 (13.41)	Pedestrian 39 (8.84)	Other Trans** 38 (8.05)	Pedal cycle 30 (8.36)	Other Trans** 19 (8.44)	Motorcycle 5 (2.85)	Motorcycle 1 (*)	Pedalcycle 1 (*)	Other Trans** 281 (9.65)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, San Diego Trauma Registry, FY 1999/00. Number and rate per 100,000.

Table 4a in the Unintentional Injury in San Diego Report 1999/2000.

^{*}Rates not calculated for fewer than five incidents.

^{**} Other Transportation.

Leading Causes of Unintentional Injury by Race/Ethnicity: Severe Injury

	White	Black	Hispanic	Asian/Other	Total
1	MVO	MVO	MVO	MVO	MVO
	804	82	505	174	1598
	(46.24)	(47.25)	(69.91)	(62.84)	(54.89)
2	Fall	Pedestrian	Fall	Fall	Fall
	686	47	259	62	1064
	(39.46)	(27.08)	(35.85)	(22.39)	(36.55)
3	Motorcycle	Fall	Pedestrian	Pedestrian	Pedestrian
	220	45	123	31	356
	(12.65)	(25.93)	(17.03)	(11.20)	(12.23)
4	Other Trans*	Pedalcycle	Pedalcycle	Pedalcycle	Motorcycle
	208	14	60	23	281
	(11.96)	(8.07)	(8.31)	(8.31)	(9.65)
5	Pedestrian	Motorcycle	Other Trans*	Other Trans*	Other Trans*
	150	13	42	18	281
	(8.63)	(7.49)	(5.81)	(6.50)	(9.65)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, San Diego Trauma Registry, FY 1999/00.

^{*} Other Transportation.

Number and rate per 100,000.

Table 4b in the Unintentional Injury in San Diego Report 1999/2000.

Leading Causes of Unintentional Injury by Major Statistical Area: Severe Injury

	Central	North City	South Suburban	East Suburban	North County West	North County East	East County	Total
1	Fall	Fall	M V O	M V O	M VO	M VO	M V O	M V O
	195	125	67	120	83	159	29	1598
	(30.98)	(17.76)	(21.39)	(24.48)	(22.04)	(42.30)	(129.94)	(54.89)
2	M VO	M VO	Fall	Fall	Fall	Fall	Motorcycle	Fall
	140	120	50	59	69	106	19	1064
	(22.24)	(17.05)	(15.96)	(12.03)	(18.32)	(28.20)	(85.13)	(36.55)
3	Pedestrian	Pedestrian	Pedestrian	Motorcycle	Motorcycle	Motorcycle	Fall	Pedestrian
	64	31	29	35	25	25	9	356
	(10.17)	(4.40)	(9.26)	(7.14)	(6.64)	(6.65)	(40.33)	(12.23)
4	Pedalcycle 35 (5.56)	Other Trans* * 22 (3.13)	Pedalcycle 15 (4.79)	Pedestrian 33 (6.73)	Pedestrian 24 (6.37)	Pedestrian 20 (5.32)	Other Trans* * 8 (35.85)	Motorcycle 281 (9.65)
5	Motorcycle 14 (2.22)	Pedalcycle 21 (2.98)	Other Trans* * 9 (2.87)	Pedalcycle 22 (4.49)	Pedalcycle 18 (4.78)	Pedalcycle 17 (4.52)	Pedalcycle 1 (*)	Other Trans* * 281 (9.65)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, San Diego Trauma Registry, FY 1999/00. Number and rate per 100,000.

^{*} Rates not calculated for fewer than five incidents.

^{**} Other Transportation.

Table 4c in the Unintentional Injury in San Diego Report 1999/2000.

Leading Causes of Unintentional Injury by Age Group: Deaths

	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Overall
1	Pedestrian 4 (*)	MVO 1 (*)	Pedestrian 4 (*)	MVO 36 (18.65)	MVO 28 (12.51)	MVO 21 (4.76)	MVO 31 (6.57)	Fall 20 (5.57)	Fall 12 (5.33)	Fall 25 (14.26)	Fall 43 (37.34)	Fall 43 (96.73)	MVO 174 (5.98)
2	MVO 2 (*)	Fall 1 (*)	Other Trans** 2 (*)	Pedestrian 3 (*)	Pedestrian 9 (4.02)	Pedestrian 10 (2.27)	Pedestrian 22 (4.66)	MVO 15 (4.18)	MVO 11 (4.8 9)	MVO 12 (6.84)	MVO 10 (8.68)	MVO 6 (13.50)	Fall 156 (5.36)
3	Ot her Trans** 2 (*)	Pedestrian 1 (*)	Fall 1 (*)	Motorcycle 2 (*)	Motorcycle 9 (4.02)	Fall 2 (*)	Fall 8 (1.70)	Pedestrian 9 (2.51)	Pedestrian 7 (3.11)	Pedestrian 5 (2.85)	Pedestrian 5 (4.34)	Pedestrian 3 (*)	Pedestrian 85 (2.92)
4	Fall 1 (*)	Pedalcycle 1 (*)	I	Other Trans** 1 (*)	Other Trans** 2 (*)	Motorcycle 2 (*)	Motorcycle 3 (*)	Motorcycle 6 (1.67)	Other Trans** 2 (*)	Other Trans** 1 (*)			Motorcycle 22 (0.76)
5				Pedalcycle 1 (*)		Other Trans** 1 (*)	Other Trans** 3 (*)	Pedalcycle 4 (*)	Pedalcycle 1 (*)	Pedalcycle 1 (*)			Other Trans** 17 (0.58)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Medical Examiner's Data, FY 1999/00. Number and rate per 100,000.

Table 5a in the Unintentional Injury in San Diego Report 1999/2000.

^{*}Rates not calculated for fewer than five incidents.

^{**} Other Transportation.

Leading Causes of Unintentional Injury by Race/Ethnicity: Deaths

	White	Black	Hispanic	Asian/Other	Total
1	Fall	MVO	MVO	Pedestrian	MVO
	129	8	55	7	174
	(7.42)	(4.61)	(7.61)	(2.53)	(5.98)
2	MVO	Pedestrian	Pedestrian	MVO	Fall
	101	5	31	6	156
	(5.81)	(2.88)	(4.29)	(2.17)	(5.36)
3	Pedestrian	Fall	Fall	Fall	Pedestrian
	41	2	18	5	85
	(2.36)	(*)	(2.49)	(1.81)	(2.92)
4	Motorcycle	Motorcycle	Pedalcycle	Other Trans	Motorcycle
	20	2	3	1**	22
	(1.15)	(*)	(*)	(*)	(0.76)
5	Other Trans* * 16 (0.92)		Fire-Burn-Scald 1 (*)		Other Trans* * 17 (0.58)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Medical Examiner's Data, FY 1999/00.

Number and rate per 100,000.

Table 5b in the Unintentional Injury in San Diego Report 1999/2000.

^{*} Rates not calculated for fewer than five incidents.

^{* *} Other transportation.

Leading Causes of Unintentional Injury by Major Statistical Area: Deaths

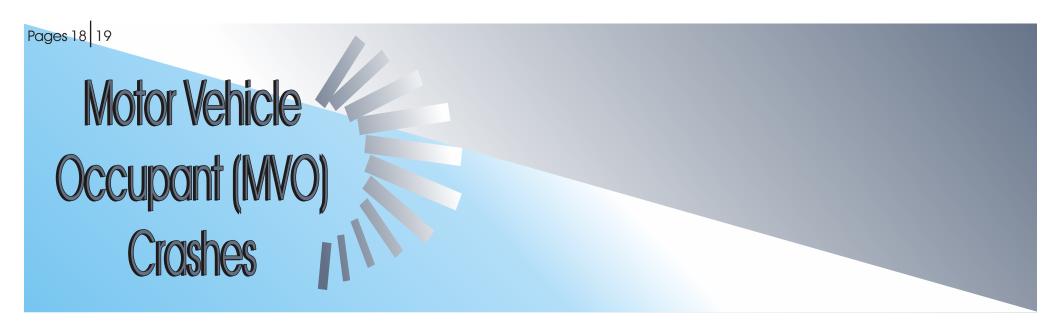
	Central	North City	South Suburban	East Suburban	North County West	North County East	East County	Total
1	Fall	M V O	Pedestrian	M V O	Fall	M V O	M V O	M V O
	24	45	17	30	22	29	9	174
	(3.81)	(6.39)	(5.43)	(6.12)	(5.84)	(7.72)	(40.33)	(5.98)
2	M V O 23 (3.65)	Fall 37 (5.26)	Fall 13 (4.15)	Fall 24 (4.90)	MVO 12 (3.19)	Fall 18 (4.79)	Other Trans** 3 (*)	Fall 156 (5.36)
3	Pedestrian	Pedestrian	M V O	Pedestrian	Pedestrian	Pedestrian	Motorcycle	Pedestrian
	16	13	10	12	11	11	2	85
	(2.54)	(1.85)	(3.19)	(2.45)	(2.92)	(2.93)	(*)	(2.92)
4	Motorcycle	Other Trans**	Pedalcycle	Motorcycle	Motorcycle	Motorcycle	Fall	Motorcycle
	2	3	3	6	5	4	1	22
	(*)	(*)	(*)	(1.22)	(1.33)	(*)	(*)	(0.76)
5	Other Trans** 1 (*)	Motorcycle 2 (*)		Other Trans** 2 (*)	Other Trans* * 5 (1.33)	Other Trans** 2 (*)		Other Trans** 17 (0.58)

Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, Medical Examiner's Data, FY 1999/00. Number and rate per 100,000.

^{*} Rates not calculated for fewer than five incidents.

 $^{^{*}}$ * Other Transportation.

Table 5c in the Unintentional Injury in San Diego Report 1999/2000.



otor vehicle occupant (MVO) crashes include both motor vehicle drivers and passengers. MVO crashes were the leading cause of unintentional death in the United States and were the leading cause of unintentional severe injury in San Diego County.

The rate of MVO crashes that resulted in paramedic/EMT responses corresponded to the age at which drivers are typically licensed and then decreased with each increasing age group.

The rates of paramedic/EMT response were less than 210/100,000 in children 0-4, 5-9, and 10-14. However, this increased to over 985/100,000 for young adults 15-19 years of age. This rate then decreased constantly to near pre-driving age groups in patients aged 85+. Blacks and Asian/Others had the highest rates of paramedic/EMT responses overall (550.85 and 547.90/100,000, respectively).

Rates for severe injury and deaths followed a similar pattern as prehospital responses. However, unlike paramedic/EMT responses, which had a continuous drop in rates from the 15-19 year old age group, the

Geographically, the East County major statistical area (MSA) had the highest rates for all three levels of severity.

rate of severe injuries and deaths increased in the 65-74 year old age group. Unlike the paramedic/EMT responses, Hispanics had the highest rate of severe injuries and death (69.91 and 7.61/100,000, respectively).

Geographically, the East County major statistical area (MSA) had the highest rates for all three levels of

severity. The next highest was the North County East MSA. The remaining rates for the remaining MSA's were similar for paramedic/EMT responses, severe injuries, and deaths.



alls were a leading cause of unintentional injury nationally and in San Diego County. For paramedic/EMT responses, there was a small peak in the rate for children 0-4 years of age (285.22/100,000) and then a much larger increase in the elderly with the highest rate (5223.38/100,000) in the 85+ age group. The rate of responses for Whites was the highest (491.24/100,000) followed by Blacks (297.90/100,000).

Geographically, paramedic/EMT response rates were relatively uniform with the exception of the East County MSA (815.49/100,000). The next highest rate was in the North County East MSA (552.03/100,000). In the 85+ age group, the MSA with the highest rate was East Suburban (6694.50/100,000). For severe injuries, although the rates were much lower, the same distribution by age was seen (0-4 year olds, 55.42/100,000; 85+, 173.21/100,000). Whites were the most likely to suffer severe injury due to falls (39.46/100,000).

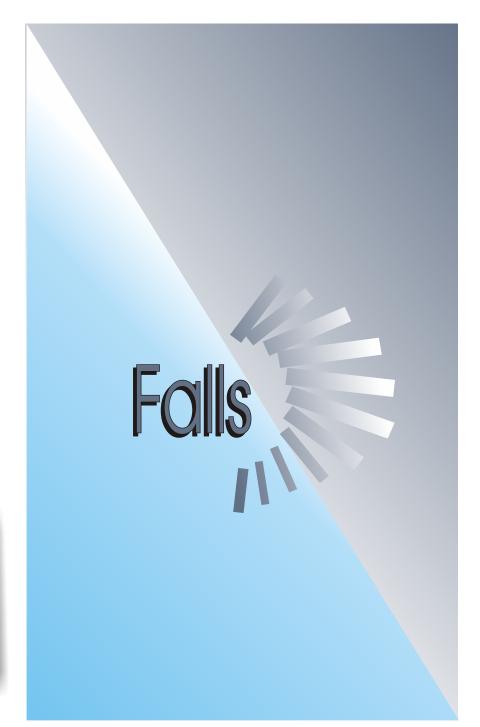
The East County MSA had the highest rate of severe injury due to falls (40.33) followed by the Central MSA (30.98/100,000). The distribution of deaths by age was slightly different

Whites were the most likely to suffer severe injury due to falls (39.46/100,000).

than paramedic/EMT responses and severe injury. There was only an increase in rates in the elderly, without the peak in children 0-4 years of age. The highest rate was seen in those 85+ (96.76/100,000). Similar to paramedic/EMT responses and severe injury, Whites had the highest rate (7.42/100,000).

The dramatic decrease in rates seen from paramedic/EMT responses to severe injuries and death signifies that although falls were common, they were proportionally less serious than other types of injuries.







poison-bite-stings can consist of various forms of mechanisms, including unintentional poisonings, dog bites, and bee stings. The only injury in this category that would be considered trauma would be bite injuries, which were too few in number to classify across age, race/ethnicity, or geographic area.

For paramedic/EMT responses, rates were relatively consistent from 15-19 year olds to 45-54 year olds with the highest rate being in the youngest of these age groups (15-19 year olds, 86.50/100,000). Another smaller peak was apparent in 0-4 year olds. Blacks had the highest rate (58.20/100,000) followed by Whites (42.85/100,000).

Geographically, the East Suburban MSA had the highest rate of responses (104.03/100,000). The highest rates in Blacks were in the Eastern Suburban MSA (225.34/100,000) and the South Suburban MSA (107.73/100,000).

For poison-bite-sting deaths, incident numbers are too few to make many comparisons for most age groups.

For poison-bite-sting deaths, 35-44 year olds and 45-54 year olds had the highest rates.

However, 35-44 (22.89/100,000) year olds and 45-54 year olds (20.07/100,000) had the highest rates. Blacks had the highest rates (13.25/100,000 followed by Whites (9.89/100,000).

The Central MSA had almost two times the rate of any other MSA (10.49/100,000), with the majority of these being in the Central San Diego subregional area (SRA). For a map of SRA's, see page 6. The high rate of death was attributed to the inclusion of recreational drug overdoses in this category.



Photo by Robert G. Bellinge



on-fatal pedalcycle injuries were a leading cause of unintentional injury in San Diego County. Additionally, the rate of these non-fatal injuries was higher locally compared to the rate for California.

As expected, the rate of paramedic/EMT responses to pedalcycle injuries increased in the 5-9 age group (64.89/ 100,000), peaked in

the 10-14 age group (123.19/100,000), and then decreased to a low in the 85+ age group (number too low to calculate rates).

Blacks had the highest rate of paramedic/EMT responses (48.40/100,000) followed by Whites (37.27/100,000). Pedalcycle

paramedic/EMT responses were least likely to occur in the South Suburban MSA (28.09/100,000), while the East County MSA had the highest rate (76.17/100,000). The rates in the remaining MSA's were

about 40.00/100,000.

The rate of non-fatal

pedalcycle injuries was

higher locally compared

to the rate for California.

The age distribution for severe injuries was similar to paramedic/EMT responses, with the highest rate in the 10-14 age group (21.51/100,000). There were no distinctive differences between racial groups for severe pedalcycle injuries. Compared to other injury types, pedalcycle injuries

0.34/100,000.

were less often fatal, with a rate of



edestrian injuries are a problem that affects people of all ages. The rate of paramedic/EMT responses was over 25.00/100,000 in every age group, with a peak in 5-9 and 10-14 age groups (53.26 and 54.75/100,000, respectively).

One of the major contributing areas of concern for these age groups was the Central MSA. Within this MSA, the National City, Southeast San Diego, and Mid-City SRA's had considerably higher rates of paramedic/EMT responses (62.99 to 179.72/100,000) compared to other areas.

consistently had the highest number of incidents. Similar to paramedic/EMT responses, severe injuries were the highest among Blacks (27.08/100,000) followed by Hispanics (17.03/100,000).

The SRA with the highest rate for Blacks was Spring Valley, which had a considerably higher rate than any other SRA for Blacks or any other Race/Ethnic category (101.33/100,000). Adults were more likely to die from a pedestrian injury compared to children younger than 20 years of age, but the number of incidents were too few to compare between different areas in the county. Hispanics had the highest rate of deaths (4.29/100,000) with



Pedestrian

Within the Central MSA, National City, Southeast San Diego and Mid-City SRA's had considerably higher rates of paramedic/EMT responses

Blacks (64.53/100,000) had the highest rate of paramedic/EMT responses followed by Hispanics (39.31/100,000). Among Blacks, the Chula Vista and Kearny Mesa SRAs had the highest rates (159.09 and 104.43, respectively). Whites had the lowest rate of paramedic/EMT responses (20.42/100,000). Children 0-4 and 5-9 years of age were most likely to be severely injured pedestrians (17.48 and 18.35/100,000, respectively).

Although the majority of SRA's throughout the county did not have enough incidents to calculate rates, the Central MSA

the highest number and rate in the South Bay SRA (9.67/100,000).

Geographically, the Anza-Borrego Springs and Coronado SRA's had the highest rates of paramedic/EMT responses.

Other Transportation

ther transportation includes All Terrain Vehicle (ATV) drivers and passengers, aircraft, animal ridden, scooters, railway/trolley, water transportation, non-collision motor vehicle crashes, and other vehicle related injuries. The rate of paramedic/EMT responses for these types of injuries peaked in the 10-14 age group (77.24/100,000) and 15-19 age group (77.24/100,000). Rates for Whites (29.79/100,000) and Blacks (28.81/100,000) were similar as were the rates for Hispanics (19.24/100,000) and Asian/Other (19.50/100,000). Geographically, the Anza-Borrego Springs and Coronado SRA's had the highest rates of responses. In the Coronado SRA, which is a busy recreation area, the rate was especially high for 10-14 year

olds (1346.50/100,000). The number of severe injuries was relatively uniform through the age groups and SRA's. However, the rate of severe injuries for Whites (11.96/100,000) was almost double that of any other group. There were no specific areas in the County with unusually high rates of severe injuries. There were inadequate numbers of other transportation-related deaths throughout San Diego County to compare geographically, by age, or by racial/ethnic group.

otorcycle includes both motorcycle drivers and passengers. Motorcycle paramedic/ EMT responses followed a similar pattern as paramedic/EMT MVO crashrelated injuries. The highest rate was among 20-24 year olds (62.13/100,000) with a constant decrease through the older age groups.

Whites had the highest rate of paramedic/EMT responses with 28.01/100,000 followed by Blacks 16.13/100,000. However, the highest rates of

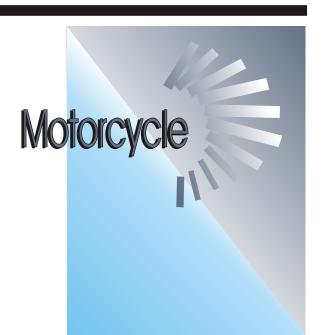
severe injuries and deaths occurred in 20-24 year olds (18.32 and 4.02/100,000,

The highest rate was among 20-24 year olds (62.13/100,000) with a constant decrease through the older age groups.

respectively). Similar to MVO crashes, the East County MSA had the highest rate of paramedic/EMT responses and

severe injuries (385.34 and 85.13/100,000, respectively).

There was an insufficient number of motorcycle deaths to compare geographically, by age, or by racial/ethnic group.



There were inadequate numbers of cut/pierce severe injury incidents throughout San Diego County to compare rates for specific areas, ages, or racial/ethnic groups.

Additionally, there were no unintentional deaths due to cut/pierce injuries. The low numbers of trauma and fatal injuries indicated that cut/pierce injuries may be severe enough to require medical response, but were not severe enough to be classified as a trauma or cause fatal injuries.

Prehospital patients with cut/pierce injuries were more likely to be 15-24 years of age.





ata regarding unintentional blunt trauma injuries were only collected for prehospital patients. Blunt trauma injuries were more frequent among adolescent and young adults aged 10-34 years of age. There was a higher rate of this type of injury among Blacks, (31.11/100,000) compared to the next highest racial/ethnic group (Whites, 18.98/100,000).

The majority of blunt trauma injuries occurred in the Central and North City MSA's (31.30 and 25.72/100,000, respectively). Within these groups, the Coronado SRA had the highest rate of blunt trauma injury (141.86/100,000).

The majority of blunt trauma injuries occurred in the Central and North City MSA's.



ire-burn-scald injuries occur from fire, hot substance (liquid, caustic, steam), electric current, and explosion of pressure vessel. Fire-burn-scald injuries are not classified as trauma injuries, and therefore were

only collected for paramedic/EMT responses and deaths.

For paramedic/EMT responses, there were two peaks. The first peak was in children 0-4 years old (30.27/100,000), which was likely caused by cooking and bathing-related injuries. For children, the North County West MSA had the highest rate (43.57/100,000). This was in part due to the high rate within the Oceanside SRA, which had a rate of 49.80/100,000.

The second peak was in 25-34 year olds, which was

Blacks by far had the highest rate of fire-burn-scald injuries.

more likely to be scald injuries caused by hot substances such as coffee. For these individuals, the highest rate was in the East Suburban MSA (33.48/100,000), with the highest rate in the Alpine SRA (339.17/100,000). Blacks by far had the highest rate of these types of injuries with a rate of 21.90/100,000. The rates for Whites, Hispanics, and Asian/Others were all less than

13.00/100,000.

Overall, the East County MSA had the fewest number of paramedic/EMT responses, but had the highest rate due to the small population of this area (80.65/100,000). There were inadequate numbers of deaths due to fire-burn-scald injuries to compare geographically, by age, or by racial/ethnic group.

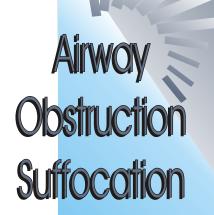
irway obstruction-suffocation injuries are not classified as trauma injuries, and therefore are only reported for paramedic/EMT responses and deaths. For paramedic/EMT responses, two age groups had relatively high rates, 0-4 year olds (55.85/100,000) and 75-84 year olds (17.37/100,000).

For paramedic/EMT responses, 0-4 year olds and 75-84 year olds had relatively high rates.

Hispanics had the highest rate of these types of injuries (9.00/100,000) followed by Whites (6.33/100,000).

The Eastern Suburban MSA had the most incidents (102) and highest rate (20.81/100,000) of paramedic/EMT responses for these types of injuries.

There were too few airway obstruction-suffocation deaths to compare geographically, by age, or by racial/ethnic group.



DrownSubmersion

rown-submersion injuries are not classified as trauma injuries, and therefore are only reported for paramedic/EMT responses and deaths. Children 0-4 account for a large proportion of all paramedic/EMT responses (46%). For this age group, the Eastern Suburban MSA had the highest rate (32.31/100,000) with the majority of these located in the El Cajon SRA (62.12/100,000).

The remaining age groups and geographical locations had too few incidents to compare rates.

The majority of paramedic/EMT responses to drown-submersion injuries were located in the El Cajon SRA.

Asian/Other had the highest rates of paramedic/EMT responses (2.53/100,000) of any racial/ethnic group. There were too few drown-submersion deaths to compare geographically, by age, or by racial/ethnic group.





Age Group: Age is reported in 5 and 10-year groupings. Between 0-24 ages are in 5-year groupings and over age 25 are in 10-year groupings.

0-4	5-9	10-14	15-19
20-24	25-34	35-44	45-54
55-64	65-74	75-84	85+

Cause of Unintentional Injury: For the purpose of this report injury refers to unintentional damage to the body resulting from acute exposure to mechanical energy. Unintentional injuries include:

> Motor Vehicle Occupant (MVO) Blunt Trauma **Unintentional Firearm** Motorcycle Pedalcvcle Poison-Bite-Sting Suffocation Pedestrian Drown-Submersion Other Transportation Other

Fall

Fire-Burn-Scald No Cause Indicated

Cut-Pierce

International Classification of Diseases, 9th revision (ICD-9): A worldwide standard reporting system for the classification and reporting of diagnoses and diseases. This edition included E-Codes, which are codes for the external cause of an injury.

International Classification of Diseases, 10th revision (ICD-10): The latest edition of the worldwide reporting system. In this edition, previously reported external causes of injury, which were reported as E-Codes, are incorporated within the main reporting system.

Incident: The number of occurrences for the specific injury type. Incidents

should not be used to compare different racial/ethnic groups, age groups or geographic areas. For these comparisons, use rates, which take into account differences in population sizes.

Major Statistical Area (MSA): An aggregation of census tracts defined by SANDAG. There are 7 MSA's in San Diego County.

Pedalcycle: Includes bicycles, tricycles, quad cars, and other pedal-powered forms of transportation.

Pedestrian: Non-motor vehicle occupants who are involved in a motor vehicle crash.

Prehospital Patient: A patient who requires medical care by paramedic/EMT personnel.

Severe Injury: An injury that requires treatment at a designated trauma center.

Subregional Area (SRA): An aggregation of census tracts defined by SANDAG. There are 41 SRA's reflecting the larger community areas in San Diego County.

SANDAG: San Diego Association of Governments.

